

AMENDMENTS TO THE CLAIMS

1 - 14 (Canceled).

15. (New) A discharge rate and pressure control valve which may be used in a fuel delivery system, the valve comprising:

a valve body having an inner bore generally defined by a bore axis, a valve inlet, and a valve outlet;

a spool member at least partially interposed within the inner bore and moveable therein generally along the bore axis;

a biasing member for biasing the spool member within the inner bore;

a force exerting portion for axially moving the spool member within the inner bore; and

a flap device including a flap inlet defined by a inlet flap outer conduit and an inlet flap inner conduit, wherein the biasing member, in a first valve configuration, permits the flap device to open when pressure within the inlet flap outer conduit is above about a first pressure, and the biasing member, in a second valve configuration, permits the flap device to open when pressure within the inlet flap outer conduit is above about a second pressure,

wherein the spool member, in a third valve configuration, directs the flow of a fluid from the valve inlet to the valve outlet.

16. (New) The valve of claim 15, wherein the flap inlet is generally defined by a flap axis, and the flap axis is generally co-axial with the bore axis.

17. (New) The valve of claim 15, wherein the force exerting portion includes an electromagnet.

18. (New) The valve of claim 17, wherein the electromagnet current is about 0 amps when the valve is in the first valve configuration.

19. (New) The valve of claim 17, wherein the electromagnet current is between about 0 amps and a threshold value when the valve is in the second valve configuration.

20. (New) The valve of claim 15, wherein axial movement of the spool within the inner bore selectively controls the discharge rate of a fluid between the inlet and the outlet.

21. (New) The valve of claim 20, wherein at least a portion of the flap device is in a first position when the valve is in the first valve configuration, the at least a portion of the flap device is in a second position when the valve is in the second valve configuration, and axial movement of the spool within the inner bore to control the discharge rate of a fluid between the inlet and the outlet is only performed when the at least a portion of the flap device is in the second position.

22. (New) The valve of claim 15, wherein the inlet flap inner conduit is in fluid communication with the valve inlet.

23. (New) The valve of claim 15, wherein the flap device includes a seat surrounding a flap orifice that defines a boundary between the inlet flap outer conduit and the inlet flap inner conduit, and a ball that selectively contacts the seat to prevent the movement of fluids through the seat.

24. (New) The valve of claim 23, wherein the flap device further includes a sleeve at least partially interposed between the biasing member and the ball, wherein the sleeve includes a ball contacting portion and a generally frusto-conical spring mating surface.

25. (New) The valve of claim 15, wherein at least a portion of the flap device is axially adjustable relative to the inner bore such that a biasing force exerted by the biasing member on a proportion of the flap device may be adjusted.

26. (New) The valve of claim 25, wherein adjustment of the flap device does not affect the volumetric flow of fluid from the valve inlet to the valve outlet.

27. (New) The valve of claim 25, wherein adjustment of the flap device does not affect the volumetric flow of fluid from the valve inlet to the valve outlet.

28. (New) A delivery system for a fluid which may be used to attain a desired pressure and discharge rate of the fluid, the system comprising:

a control valve having:

a valve body having an inner bore generally defined by a bore axis, a valve inlet, and a valve outlet;

a spool member at least partially interposed within the inner bore and moveable therein generally along the bore axis;

a biasing member for biasing the spool member within the inner bore;
a force exerting portion for axially moving the spool member within the inner bore; and

a flap device including a flap inlet defined by a inlet flap outer conduit and an inlet flap inner conduit, wherein the biasing member, in a first valve configuration, permits the flap device to open when pressure within the inlet flap outer conduit is above about a first pressure, and the biasing member, in a second valve configuration, permits the flap device to open when pressure within the inlet flap outer conduit is above about a second pressure,

wherein the spool member, in a third valve configuration, directs the flow of a fluid from the valve inlet to the valve outlet; and

a fluid pump having a pump inlet and a pump outlet, wherein the pump inlet is in fluid communication with the valve outlet.

29. (New) The delivery system of claim 28, further comprising a pressure sensor for detecting the pressure of the fluid within a portion of the delivery system downstream of the pump.

30. (New) The delivery system of claim 29, further comprising a control unit, wherein the control unit supplies power to the force exerting portion in response to a preselected pressure detected by the pressure sensor.

31. (New) The delivery system of claim 28, wherein the force exerting portion includes an electromagnet.

32. (New) The delivery system of claim 31, further comprising a control unit, wherein the control unit supplies current to the electromagnet to reconfigure the valve from the first valve configuration to the second valve configuration.

33. (New) The delivery system of claim 28, wherein the pump outlet is in direct fluid communication with the inlet flap inner conduit such that the flap device may regulate the pressure output of the pump within a portion of the delivery system.

34. (New) The delivery system of claim 28, wherein the flap device selectively permits movement of the fluid within the inner bore.